DOCUMENT RESUME

ED 182 476 CE 023 991

AUTHOR	Tuttle, Francis T.: Wall, James E.
TITLE	Revitalizing Communities through Industry Services Programs. Critical Issues Series, No. 2.
INSTITUTION	American Vocational Association, Washington, D.C.
PUB DATE	79
NOTE	32p.
AVAILABLE FROM	Special Publications, American Vocational Association, 2020 North Fourteenth Street, Arlington, VA 22201 (Order Number 10179, $3.00; discounts available on bulk orders).
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Community Development: *Industrial Training: *Job Development: Job Placement: *Job Training: Program Descriptions: *School Industry Relationship: *Statewide Planning
IDENTIFIERS	*Mississippi: *Oklahoma

ABSTRACT

This publication describes some of the basic features of state industry services programs, particularly those related to job training. It seeks to answer the following questions: How does an industry services program differ from more traditional vocational education programs? What types of training are provided? Who benefits? How are the activities of industry, state or local agencies, and community groups coordinated? What is the most efficient and effective way to run an industry services program? Two different statewide industry services programs are described, one in Mississippi and one in Oklahoma. (BM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED182476

Critical
Issues
Series, no. 2

REVITALIZING COMMUNITIES THROUGH INDUSTRY SERVICES PROGRAMS

Francis T. Tuttle
James E. Wall

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

A.C. Curley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CE 023 991

American
Vocational
Association

ABOUT THE AUTHORS

Francis T. Tuttle has been Oklahoma state director for vocational and technical education since 1967. He was responsible for starting and maintaining Oklahoma's thriving industry services program.

Tuttle is past president of the National Association of State Directors of Vocational Education and 1975 winner of an Outstanding Service Award from the American Vocational Association.

Jimmy F. Roblyer, coordinator for the Industrial and Technical Services Division in the Oklahoma State Department of Vocational and Technical Education, assisted Tuttle in preparing Part II of this publication.

James E. Wall is director of the Bureau of Educational Research and associate dean for research and development at Mississippi State University.

Much of the credit for developing Mississippi's successful industry services program goes to Wall, who served as director of the state's Research and Curriculum Unit from 1965 to 1975.

Wall is past president of the American Vocational Education Research Association and editor of *Vocational Education for Special Groups*, the 1976 yearbook of the American Vocational Association. He wrote Part I of this publication.

Special Publications Editor:
Toni H. Lydecker

Published 1979 by The American Vocational Association, Inc., 2020 North Fourteenth Street, Arlington, Virginia 22201.
Copyright © by The American Vocational Association, Inc. No part of this publication may be reproduced in any form without written permission from the publisher.
Printed in the United States of America.

3

CONTENTS

5 **I. Industry Services Programs: The Mississippi Story**

7 Starting the Mississippi Program

8 Basic Definitions

9 Three Major Purposes

9 Two Kinds of Training

10 Who Benefits?

11 Statewide Coordination

12 Establishing Industry Contacts

13 Identifying Training Needs

14 Selecting and Training Personnel

14 Selecting Trainees

15 Acquiring Resources

15 Conducting the Training Program

16 Evaluation and Follow-up

16 A Leadership Development Project

20 For Further Reading

21 **II. Industry Services Programs: The Oklahoma Story**

23 Responding to Industry Needs

24 A Success Story

25 Stimulating Industrial Development

26 The Program in Action

29 Training Facilities

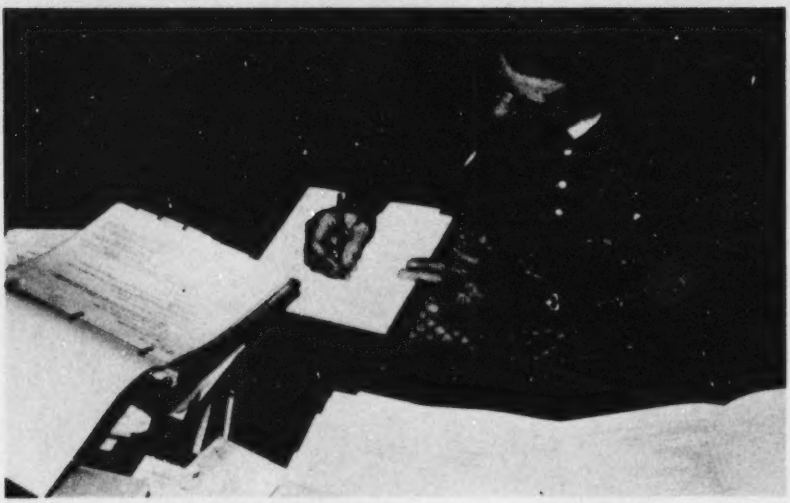
30 State Equipment Pools

32 Results

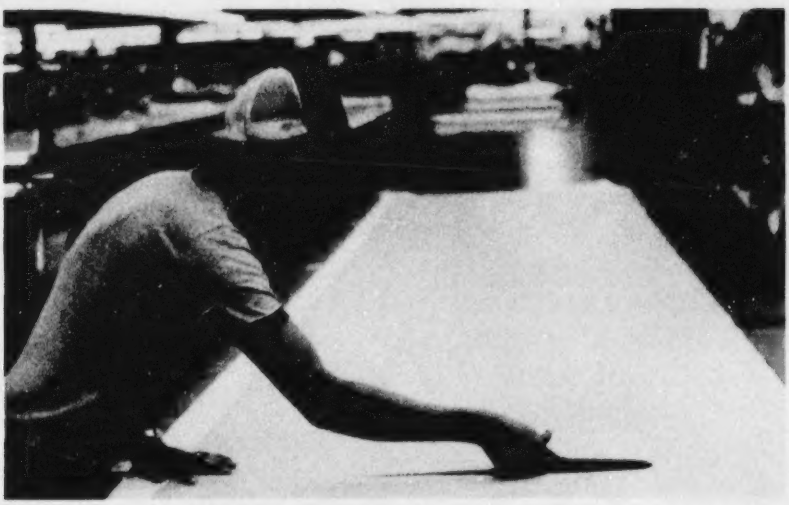
4

Part I

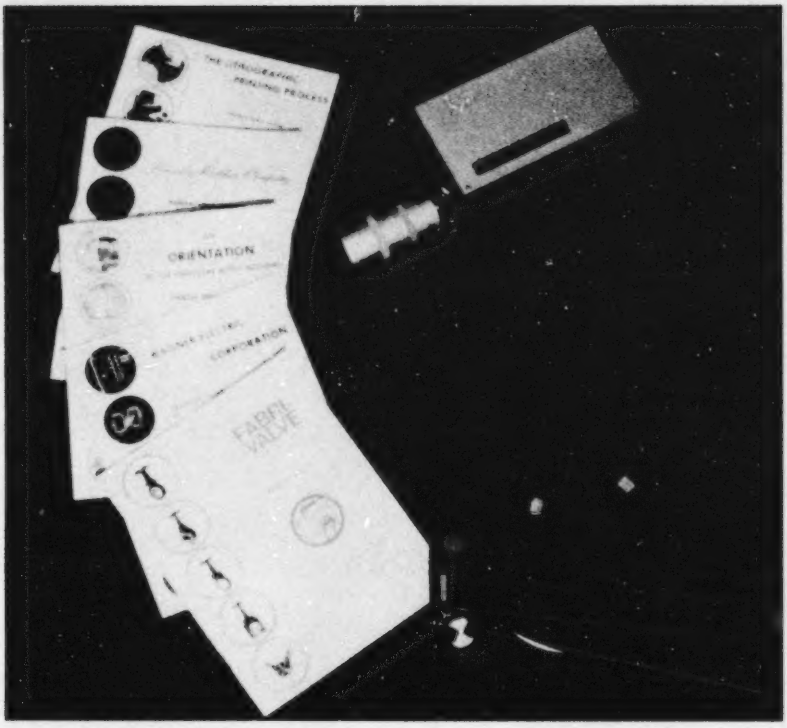
INDUSTRY SERVICES PROGRAMS: THE MISSISSIPPI STORY



Keith Herring plans a curriculum package for one of Oklahoma's industry services programs.



Training to be a materials cutter, a student carefully cuts heavy cloth for Arctic clothing.



Mississippi's Research and Curriculum Unit prepares custom-designed manuals and other aids to train prospective employees to the performance levels specified by each industry.

More than 40,000 communities throughout the country suffer from varying degrees of unemployment, chronically low per capita income and general decline in the quality of life. Most of these communities would begin to solve these problems if they could attract new industries and encourage existing industries to expand.

An important consideration for an industry in deciding whether to relocate or expand is the quality and quantity of available labor. To make sure industries are provided with the trained labor force they need, many communities have organized industry services programs. The overall purposes of these programs are job training, job creation and job placement. During the 1960s and 1970s, a number of states have established comprehensive industry services programs coordinated on a statewide basis. Funded largely through state vocational funds, these programs are a major contribution by vocational education to community development.

For those considering the establishment of an industry services program, many questions arise. How does an industry services program differ from more traditional vocational education programs? What types of training are provided? Who benefits? How are the activities of the industry, state or local agencies and community groups coordinated? What is the most efficient and effective way to run an industry services program?

This publication seeks to answer these questions by exploring some basic features of industry services programs, particularly those related to job training. Part I will be based on approaches used in a statewide industry services program currently operating in Mississippi.

STARTING THE MISSISSIPPI PROGRAM

The seed of the Mississippi industry services program was planted during the late 1950s when Joseph Lewis, then state supervisor for trade and industrial education, recognized the need for closer interaction between the state government and industry. He was not able to translate his ideas into action, however, until he became state director of vocational education in 1972.

In 1973 a staff member in the Division of Vocational and Technical Education was assigned to work half-time on starting the industry services program. As the program gained momentum, the staff grew to four full-time employees. It is projected that 10 people will be needed within the next two years to run the program.

Organization and Funding

Other state and local agencies gradually became involved in the industry services program. One of the most important of these was the Research and Curriculum Unit (RCU), which developed the instructional program and materials and eventually became the monitor and evaluator of the program.

With its solid track record, the RCU eventually won federal funding to conduct a leadership development project designed to train local coordinators for industry services programs. This highly effective project,

which was field tested in cooperation with Oklahoma and Florida, is described more fully later in this publication.

Success and Steady Growth

In its five years of operation, the Mississippi program has successfully served more than 60 industries. The steady growth and stability of the program can be attributed in part to the fact that it originated in the State Division of Vocational and Technical Education.

When an industry services program originates in other state agencies, it is often more vulnerable to political pressures and changes. For example, Florida's industry services program was started in 1969 by the governor, abolished in 1971—despite its proven effectiveness—and reinstituted only in 1978.

BASIC DEFINITIONS

Industry services programs offer a means for public agencies and institutions to become involved in recruiting, testing and training workers for private industry. Such services are necessary when more traditional vocational curriculums do not satisfy the unique needs of a particular industry, when students participating in existing programs are not available for immediate employment or when qualified workers are not otherwise available in the community.

In contrast to traditional vocational programs, industry services programs are usually short-term; have tight target dates for training completion; are focused on relatively small groups of trainees; and may use company plants, schools, community facilities or a combination of these as training sites.

From the industry's point of view, a major advantage of industry services programs is that they are normally custom-designed for specific industries. That is, a set of training objectives is identified for each industry served and training strategies are planned to meet these objectives. A second advantage is that the start-up time required is usually briefer, since statewide industry services programs are funded specifically to respond to the needs of industry.

The Clientele

Most individuals who enter industry services programs are either in the labor force already or they are attracted to the program because immediate employment after training is virtually assured. A more traditional vocational program would ordinarily not attract this type of client. Because there is little overlap in clientele with traditional programs, industry services programs enable vocational education to serve more people.

Industry services may be provided in public training facilities on the student's own time or in industry facilities during working hours for prospective or already employed personnel. Clients include employed persons who want to work for the client industry; unemployed persons seeking work; newly hired persons and employees who want to change positions within the industry, obtain promotions, learn new manufacturing techniques or obtain wage increases.

THREE MAJOR PURPOSES

A comprehensive industry services program accomplishes at least three major purposes of benefit to both the community and the industry: job training, job creation and job placement.

Job training provides industry with a trained labor force and enables citizens in the community to acquire the skills necessary to enter new or better jobs. In addition to learning job skills through the industry services program, clients acquire the values, attitudes, interests and related knowledge appropriate to the occupation in which they seek employment. Characteristics of an industry services program that can contribute to successful job training include top-notch personnel, good coordination between industry, public agencies and other parts of the community, and a close correlation of job training efforts with community and business needs.

Job creation takes place as occupational opportunities in the community expand through industrial recruitment and expansion, and through the associated expansion of sales and services. Some people define the job creation function of industry services programs narrowly as a "seek-and-find mission" by which industries are lured to a particular community. Such a limited definition reduces job creation to a sales or publicity pitch, a role which may reap success only over the short term. Long-term community growth and progress depend as much, however, on promoting the stability and continuing growth of existing industries as on success in attracting new industry.

Job placement comprises all the activities carried out to place people, once trained, in jobs. It is measured according to new hires reported by employers. Once created, jobs must be filled. Once completed, training must find fruition in satisfactory employment. Thus, the success of job training and job creation depend on effective job placement.

TWO KINDS OF TRAINING

Pre-employment and in-plant training are the two broad categories of job training in an industry services program. Although both pre-employment and in-plant training are often provided for a client company, one type of training may be provided without the other.

Pre-Employment Training

Pre-employment training is conducted for prospective employees before a new plant opens or when an existing industry expands. It is designed to prepare the trainees for immediate employment opportunities and is not limited to particular target groups. Many participants in pre-employment programs are already employed, but wish to compete for new jobs.

The training institution and the local employment service office usually recruit the trainees, who attend classes on their own time without compensation. Usually the pre-employment training program is conducted three or four nights per week for nine to sixteen hours altogether. The classes are conducted at any time convenient to the trainees, but most prefer evening classes.

No charges are made to the trainee or the company by the training institution. The trainees have no firm commitment they will receive a job, but successful completion of training usually insures that a job offer will be made. Graduates of a pre-employment training program are not obligated to accept employment with the client company.

In-plant Training

In-plant training is for workers already employed by an existing industry or business that is trying to improve the quality of its product or service, is entering an expansion program or is adapting to changes resulting from technological advancement. This type of training is provided for newly hired employees as well as for regular employees who can profit from upgrading instruction. In fact, it may be the second phase of training after graduates of a pre-employment program have been selected by the company.

The trend is to include both job-skill and worker-oriented content in the in-plant training programs. Worker-oriented training is designed for individuals who have certain basic deficiencies that would hinder successful skill training as well as progress on the job. Potential workers may need to improve their performance or knowledge in the following areas: basic math and reading, human relations, worker responsibilities, family planning, housing, health care, financial counseling, personal appearance and transportation.

In-plant training is conducted on the production line or in some other appropriate area at the plant site. The training lasts as long as necessary to meet pre-established proficiency levels. Client company supervisors almost always provide the instruction for in-plant programs. The time spent by the instructors in training is reimbursed by the public training institution. The percentage of the supervisor's time in actual training diminishes as the employees become more proficient and more time is spent on supervision.

Consumable supplies are not usually provided by the public training institution for in-plant training. Products manufactured by the employees during in-plant training are marketable, provided the products meet company quality control specifications.

WHO BENEFITS?

Industry services programs can revitalize an entire community. In particular, they benefit participants, industries and educators. Those who are involved in the industry services activities become pipelines for communication between the industry and the community. The cooperative efforts between the industry and local agencies to provide industry services elevate each to a new level of importance in the community.

Benefits to Participants

Industry services programs help people who are untrained, unemployed or underemployed move into productive and rewarding careers. The payoff for participants is immediate because the instruction provided is

linked directly to actual jobs in industry. Each participant receives specialized training based upon clearly stated industry needs. Therefore, the participant's value in the competitive labor market is increased significantly.

Because instruction in an industry services program is often conducted by industry managers and supervisors, participants are better able to assess first-hand whether the jobs in the industry are compatible with their needs and interests. They also learn how to function as members of a team before actual employment.

The length of an industry services program is not limited to set periods of hours-per-day or weeks-per-year. This flexibility permits programs to be custom designed to serve the needs of prospective employees as well as those of the client industry.

Benefits to Industry

Each industry services program is a partnership between an industry and one or more local or state agencies. The industry receives several benefits from this joint endeavor. Individuals are trained at low cost to the industry, the participants already employed learn new skills that enable the industry to achieve increased productivity, and the industry is able to operate more efficiently with better trained personnel.

Benefits to Educators

Educators benefit from their involvement with industry services programs through gaining the opportunity to train participants. In addition, because industry representatives are innovators in task efficiency, they may contribute new ideas about training practices which complement or improve the practices used in traditional vocational programs.

STATEWIDE COORDINATION

Statewide coordination of the industry services program can enhance the efforts of individual communities. Two prevalent methods of coordinating statewide programs are the single-agency and the multiple-agency approaches.

Some states set up a totally new agency under which all aspects of the industry services program are administered. This agency seeks out and recruits new industries, provides job training and performs job placement. States using this approach include Alabama, Georgia, North Carolina and South Carolina.

Other states have chosen to coordinate the expertise found in a number of state and local agencies in order to accomplish the same objectives. Notable examples of the multiple-agency approach are Florida, Mississippi and Oklahoma.

Both approaches have advantages and disadvantages. The single-agency states claim to have better control of all industrial development activities and to be able to respond more quickly to an industry's needs. The multiple-agency states, on the other hand, claim to offer a wider variety of expertise found in multiple agencies and to have a broader base of leadership available at the state, regional and local levels.

More About Mississippi

Mississippi is an example of a state that continues to use the multiple-agency approach successfully. During its five years in operation, the Mississippi industry services program has trained workers for industries that produce electrical equipment for sophisticated printing industry jobs, for wood products industries and for heavy construction. To date, more than 60 industries or firms have been served.

The state agencies involved in the Mississippi industry services program include the State Economic Council, the Governor's Office of Education and Training, the Agriculture and Industrial Board, the Division of Vocational and Technical Education in the Department of Education and Research, the Research and Curriculum Unit located at the University of Mississippi, and the State Employment Service. The names of agencies will vary from state to state, but the different functions that must be performed are roughly the same for any industry services program.

Working with local chambers of commerce, the State Economic Council carries out much of the seek-and-find mission within the state, while the Agriculture and Industrial Board and the Governor's Office recruit industries outside the state and even outside the country. The Division of Vocational and Technical Education is responsible for the job training aspect of the program. It maintains close relations with the Research and Curriculum Unit, which performs technical services such as gathering pertinent data, doing feasibility studies and developing curriculum materials. The State Employment Service and its local offices screen potential trainees.

When multiple agencies are involved in the industry services program, as in Mississippi, coordination of their efforts must be centralized. A good approach is to make one person responsible for coordinating all efforts. Overall coordination of Mississippi's program is provided by a staff person in the Division of Vocational and Technical Education.

ESTABLISHING INDUSTRY CONTACTS

The first step in establishing a vigorous program is to seek new, incoming or existing industries interested in industry services. As mentioned earlier, one or more state agencies perform the seek-and-find mission. Quite often, the industry itself makes the initial inquiry about available services.

Once an industry demonstrates an interest in the program, the state coordinator of industry services arranges for a meeting with industry representatives to outline in detail the services available from the State Division of Vocational and Technical Education, the Research and Curriculum Unit, State Employment Service offices and local training institutions.

The State Employment Service may be called upon to provide statistical information about available manpower and average wage rates for the type of industry in question. The coordinator may also ask the State Research and Curriculum Unit to conduct community surveys on relevant issues such as economic trends, energy sources and population mobility.

The State Division of Vocational and Technical Education can provide information on available training services and local public institutions can provide information on the facilities and equipment available for training. Arrangements can be made for local chambers of commerce and other groups to give industry representatives guided tours of the community, including visits to possible sites.

The initial meetings between the agency and industry representatives are often conducted in an out-of-state parent plant. This gives the state representatives an opportunity to view first-hand many of the operations of the prospective industry. It may be possible on some occasions to collect most of the information needed to plan and conduct a training program during the initial plant site visit. However, it is usually necessary to make other visits to the parent plant to interview workers, observe work in progress, and photograph or videotape task procedures.

LAYING THE GROUNDWORK

Important steps in laying the groundwork for an industry services program are the identification of specific objectives, development of training agreements and establishment of a schedule of tasks to be completed.

For the industry services program to succeed, the industry must be convinced that the training provided is an excellent investment. Although the various state and local agencies provide much assistance without cost, representatives of the client industry must recognize that training cannot be conducted without commitments from industry personnel.

The commitments that will be necessary are identified in a meeting between agency and industry representatives by setting overall objectives and analyzing what must be completed to achieve them. Once the tasks are identified, the resources that must be provided for training can be determined. This framework serves as a basis for developing an agreement that indicates: (1) the tasks to be performed, (2) who will perform each task, (3) the cost for each task and (4) who will pay for each task.

Once an agreement has been reached, the schedule is developed, indicating starting and completion dates for each task. Someone is designated overall coordinator of the various assignments during the industry services project. The local training institution usually provides a staff person to serve as coordinator for each local project. Otherwise, a staff member of the State Research and Curriculum Unit or another state agency serves as project coordinator.

IDENTIFYING TRAINING NEEDS

The information collected during initial meetings is used to obtain industry commitments and to develop agreements. This information also suffices for determining the overall cost of the industry services program. However, much more information is required in order to plan detailed training content. It is often necessary to make several more visits to the parent plant site to interview workers, observe work in progress, and compile information on worker needs and production processes. Industry

representatives who assist in this effort are managers, engineers, supervisors, quality-control specialists and production-line workers.

SELECTING AND TRAINING PERSONNEL

Constant contact is maintained with the state or local Employment Service if new personnel are needed for the training program. In most communities, Employment Service representatives can provide information on the number of persons available for training, their education and work experience, willingness to move to a new job, attitude towards work and advancement potential. This detailed information about potential participants is invaluable in planning the content of the training program.

The Employment Service may also be able to provide data on wage rates and trends and to do special surveys to determine the availability of a trained workforce in a given community.

Probably no component is more important to the success of an industry services program than properly prepared instructors. Industry services instructors are usually selected from the ranks of experienced employees in the client company for both pre-employment and in-plant training programs. However, instructors at the training institution may be available for service if needed. It is essential that the most qualified instructors be selected.

Instructors should be informed of their role in the training program as soon as possible. Every effort should be made to involve them in all phases of planning for the program, including the development of training aids. The local coordinator assists the instructors in organizing classes and in using the most appropriate training procedures.

SELECTING TRAINEES

An adequate supply of qualified prospects for training and employment can usually be provided to an industry. In Mississippi, the State Employment Service offices have access to a statewide computerized telephone/viewing screen hookup, which lists all jobs available and their locations throughout the state. Every citizen in the local community who may be interested has access to this information. This speeds up recruiting prospective trainees and skilled workers available for training or employment.

If necessary, an advertisement may be carried in a local newspaper or through some other news media, requesting applications for the training program. Employment service personnel and training institution counselors work closely with the client company in recruiting, testing, counseling and referring prospective employees.

Another approach is for the local industry services coordinator to assist the client company in planning a training program for upgrading workers. In this type of training program, assistance is provided in selecting workers who can profit from new or upgraded skills. The program may be conducted at the plant site or at the public training institution.

ACQUIRING RESOURCES

The facilities, equipment and other resources in local vocational-technical institutions may be available for training. Training may also be provided at the plant site, using industry equipment, tools and supplies. Some public training institutions have purchased mobile learning classrooms for use when other facilities are not available.

The extent of difficulty in acquiring a training site, tools and supplies depends upon the type of program offered. There may be little or no difficulty in acquiring resources for an in-plant training program. On the other hand, considerable amounts of time and effort are required to obtain resources for a pre-employment training program that will utilize a public training facility and equipment, tools and supplies identical to those used in the industry. These factors should be taken into account in the initial industry/agency agreement.

CONDUCTING THE TRAINING PROGRAM

The local industry services coordinator identifies the jobs in an industry for which training is needed, lists the tasks performed by individuals in these jobs, identifies the knowledge and procedures used to complete each task, writes performance objectives and standards for each task, and prepares training aids (e.g., manuals and videotapes). The purpose of the training materials is to assist in training prospective employees to the performance levels desired by the industry. The public training institution itself has no preconceived or artificial standards that must be met.

The trend in the development of training materials is to prepare self-paced units or modules for each task or each set of closely related tasks. Self-paced units are especially useful when trainees differ vastly in their interests, abilities, knowledge and attitudes, and when the instructor or supervisor does not have large blocks of time available for instruction. Learning centers can be set up so that each trainee has a personal program of study and has access to all necessary instructional aids. The instructor or supervisor is available to assist trainees when needed.

The local industry services coordinator may make decisions that assist in achievement of the training objectives at any point in the training program. Each program is monitored from beginning to end and corrective action is taken when necessary to facilitate the work of the program staff. Time is set aside periodically to examine the effectiveness of the training activities. The ratings and accomplishments of each trainee may be reviewed periodically by company personnel. The ratings are a basis for continuing company production and expansion plans.

The Instructor's Role

The role of the instructor is to plan a schedule of learning activities for the trainees. The learning activities parallel the tasks performed in the industry jobs. In addition, the instructor prepares an agenda for each session and assembles and organizes the training aids to be used during each

training session. The needs of the trainees change as the program progresses and adjustments in the training schedule may be required. The instructor advances each individual through as many learning experiences as time and ability permit.

Recognizing Trainee Accomplishments

The accomplishments of each program participant should be recognized by the training institution. Certificates provide tangible evidence of achievement. A time can be set aside at the completion of training for a formal presentation of the certificates by a training institution or industry official.

The most meaningful way to recognize accomplishments is to place each participant in a rewarding job or to provide opportunities for advanced placement. Training programs should be motivational in nature, the results being that trainees set new employment goals. When these goals are reached, they will most likely strive for higher levels of achievement.

EVALUATION AND FOLLOW-UP

Each industry services program is evaluated according to whether the objectives established at the outset were accomplished. Evaluation procedures should consist of more than a written or verbal expression from a client company official that the program was effective. State and local personnel should be involved in a continuous process of evaluation as they monitor the program.

Because the instruction is competency-based, evaluation is, in a sense, self-contained. If trainees do not develop the needed competencies, they will probably not be hired. Therefore, placement statistics are a good measure of success. In addition, coordinators should interview trainees, instructors and client company officials during and following the training activities to evaluate the worth of the program.

Post-project evaluation is especially important during the critical early weeks of plant production start-ups. Detailed discussions and observations of workers' abilities and attitudes will reveal the strengths and weaknesses of the training program. Areas where additional training is needed can be spotted.

An initial training program will not solve training needs once and for all. The public training institution provides training as long as it is needed from inception through expansion. Good industry services personnel continuously assess training needs and try to improve services to industry.

A LEADERSHIP DEVELOPMENT PROJECT

After Mississippi had operated its industry services program for some time, it became apparent that greater attention should be given to the needs of program leaders, particularly local coordinators. These community leaders are highly important because they carry out the interaction between client industries and local training institutions. It was recognized

TRAINING COORDINATORS IN PROGRAM COORDINATION

Performance Needs	Curriculum Content
Locate and use existing curriculum materials and instructional media.	Identification and use of a variety of local, state and national sources of curriculum and instructional materials (e.g., AIM/ARM, ERIC, National Network of Curriculum Centers, Research Coordinating Units, The National Institute of Education's labs and centers, industrial materials).
Know and use local and state information networks.	
Assess the quality and relevance of existing training materials for potential use.	Information sciences; establishing and operating a specialized, technical library/resource center.
Use data for community needs assessments and labor market surveys to set priorities for effective and efficient training.	Training program management techniques.
Work with local training personnel to adapt, modify and develop necessary support materials for use of training materials.	Techniques and experiences in analyzing trainee group characteristics, instructional settings and instructional requirements.
Identify state and local decision making structures and barriers to training program changes. Identify and work effectively with state and local industry leaders to carry out training program changes.	Theory and research in the change process.
	Interpretation and use of community and labor market data to help set priorities for training implementation.
	Product and process evaluation theory and techniques.

that community leaders presently working in the program needed to upgrade and expand their competencies, especially in planning, developing training materials, conducting and evaluating training programs, and coordinating a variety of interagency-industry activities in the community.

The local program coordinator's mission is a broad one: to improve political, social and economic conditions that are conducive to the conduct of a comprehensive industry services program. For example, he or she may have one or more of the following responsibilities: (1) to resolve conflicts between helping-agency professionals and the industry-business clients they serve, (2) to improve communication among the various cooperating agencies and (3) to be a spokesperson for the program in dealing with local officials, industry personnel, state legislators and others who provide funding.

TRAINING COORDINATORS IN PROGRAM PLANNING AND EVALUATION

Performance Needs	Curriculum Content
Locate, design and conduct industry and community needs assessments, labor market surveys, occupational performance surveys and analysis.	Organization and use of advisory committees that include educators, agency officials and employers.
Interpret and use data from community and labor market surveys to help establish program policy. Define the scope and focus of instructional programs. Set realistic priorities so relevant curriculum development and implementation can be accomplished effectively.	Theory and uses of decision-oriented research in curriculum development.
Analyze and use data from occupational performance surveys to identify relevant job performance criteria for curriculum construction.	Identification of sources, interpretations and uses of available survey data (e.g., census data, labor market surveys, Employment Security data).
Evaluate the validity of curriculum content for the intended scope and focus of training.	Survey of research techniques.
	Procedures for construction and use of occupational task inventories.
	Guidelines for estimating the character of jobs in the immediate future.
	Procedures for structuring relevant job performance criteria for training.
	Ergometrics (measurement of work behavior).
	Training project management techniques such as PERT, MBO.
	Guidelines for preparing terminal job performance objectives.
	Product evaluation theory and techniques.

Cooperative Study

To help meet the personnel needs of industry services programs, the states of Florida, Oklahoma and Mississippi cooperated in a study designed to: (1) identify and analyze the competencies needed by coordinators to successfully administer and coordinate industry services programs, (2) develop and field test an instructional program and materials for training state, area and local coordinators who plan, develop, implement and evaluate industry services programs and (3) develop a guide to facilitate the use of these instructional materials.

TRAINING COORDINATORS IN MATERIALS DEVELOPMENT

Performance Needs	Curriculum Content
Manage training materials development efficiently and effectively (i.e., how to derive learning objectives, write and edit instructional materials, design appropriate media and instructional plans).	Organization and use of advisory committees. Curriculum development, project management techniques (PERT, MBO, etc.).
Prepare trainee performance objectives, using terminal performance objectives. Derive and state enabling objectives, using trainee performance objectives.	Techniques and experiences in analyzing trainee group characteristics and instructional requirements. Interpretation and use of data to derive trainee performance objectives.
Evaluate the validity and usefulness of trainee performance and enabling objectives. Evaluate the effectiveness of teaching strategies and learning experiences.	Techniques to analyze trainee performance objectives to derive enabling objectives. Product evaluation theory and techniques. Design and conduct of formative evaluation (including basic techniques to design adequate controlled experiments; test and measurement theory).

This study resulted in the preparation of a coordinator training program consisting of 33 modules. A set of the modules was disseminated to each state research coordinating unit and curriculum laboratory and to the ERIC system. Performance needs and curriculum content for the coordinator training program are given in the charts on pages 17–19.

The Coordinator as "Intervener"

The training program was based on the premise that the coordinator is essentially an "intervener" whose actions will affect the balance of forces in the community. The decision to provide training for a new, incoming or expanding industry, for example, introduces a new power element that will affect many individuals and groups in the community.

Although the industry services coordinator, as intervener, may relate in a wide variety of ways to those with whom he or she is working, all attempts to create change are based on two basic assumptions. First, the intervener must make a judgment about the need for training and may very well decide that there is a training gap the industry services program

can help fill. Secondly, the intervener may have to assert influence or authority over others involved.

The instructional materials in the training program will assist the coordinator in acquiring the necessary skills to become an effective leader. It is vitally important that the coordinator possess the leadership abilities that will lead to the best results for everyone concerned—the industry, the cooperating agencies, trainees and others.

Briefly, the case made for the coordinator training program was that the timing and conditions in vocational educat on in Mississippi and in several other states were ripe for training programs to prepare a new breed of vocational education leaders—people who could become change agents through planning and conducting industry services programs. Rapid social, industrial and technological changes are resulting in increased demands for improved occupational opportunities. There is a growing belief that improved industry services programs can be powerful agents in community development.

The role of an industry services program coordinator is a powerful one. He or she can create widespread changes in vocational education. These leaders are urgently needed to improve the quality, efficiency and coordination of expanding industry services programs.

SUMMARY

Through industry services programs, vocational education can contribute directly to the economic health of communities. These short-term, intensive training programs are a useful adjunct to ongoing vocational programs, particularly in communities or regions where the proportion of unemployed or underemployed people is high.

Statewide industry services programs require skillful coordination on multiple-agency and multiple-level bases. Cooperation among states such as Mississippi, Oklahoma and Florida in developing leadership training modules for local training coordinators has promoted even broader coordination.

FOR FURTHER READING

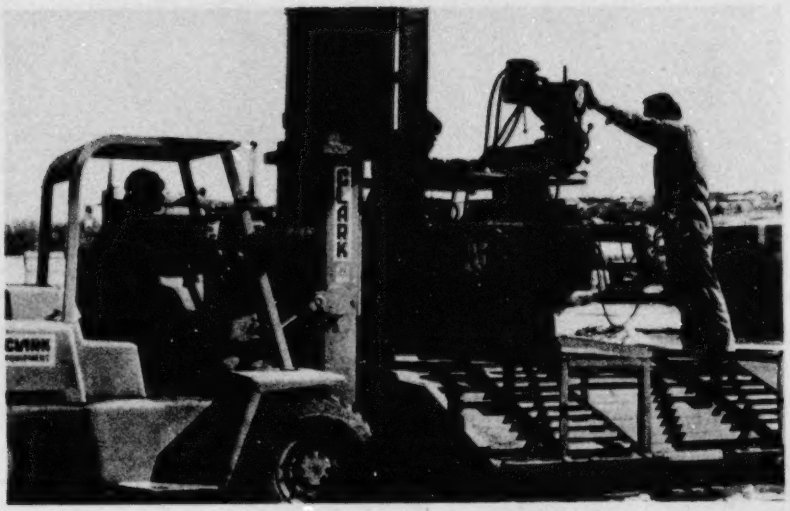
Brooks, William Kent; Herring, William Keithly; and Newby, Howard L. Start-up training in Mississippi: Program development guide. Mississippi State, Miss.: Research and Curriculum Unit for Vocational-Technical Education, Mississippi State University, 1974.

Pelham, John T. Manpower development in the community context. Unpublished doctoral dissertation, Mississippi State University, 1972.

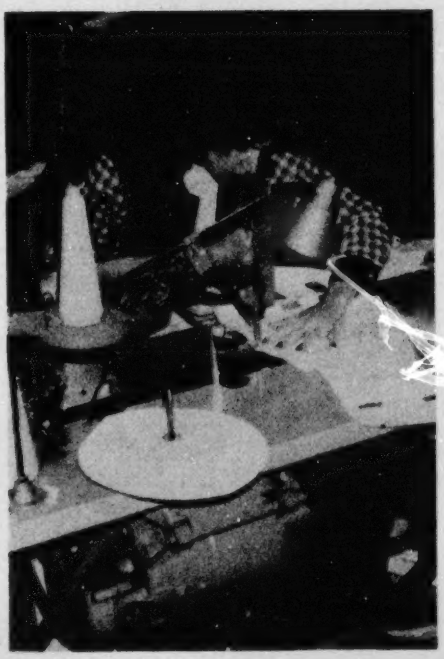
Wall, James E. and Brooks, William Kent. Preparation of leaders for industry services programs in state, area, and local vocational education agencies: Final report. Mississippi State, Miss.: Research and Curriculum Unit for Vocational-Technical Education, Mississippi State University, December 1976 (USOE Project No. 498AH50126).

Part II

INDUSTRY SERVICES PROGRAMS: THE OKLAHOMA STORY



A heavy piece of industrial equipment is loaded with a forklift onto a truck. Part of Oklahoma's state-owned equipment pool, the machinery will be transported to another site for use in an industry services program.



Trainees in one of Oklahoma's industry services programs learn sewing techniques that may land them jobs in a local textile industry.

An Oklahoma student enrolled in an electronic welding program learns to operate a drill press.

Vocational education can play a pivotal role in the economic development of communities throughout the nation. Industrial growth means new capital investments, a vital factor in economic revitalization. These investments, when accompanied by new jobs and adequate opportunity to train for jobs, have positive economic and psychological effects on the labor force, owners and managers of business and industry, and the community as a whole. Capital investments in a state attest to the faith that indigenous workers, business and industry, and leaders of local, state and federal agencies have in the state's future.

Vocational education's contribution to economic development comes through bringing training services quickly to industries and communities that need them. Two types of needs commonly arise:

1. Start-up training to provide an initial labor force for a new or expanding industry
2. Ongoing training to serve the continuing labor force needs of an existing industry

Local vocational programs have a good track record for delivering the second type of training. Our experience in Oklahoma has shown that start-up training, on the other hand, is most successful when initiated, directed and conducted at the state level.

RESPONDING TO INDUSTRY NEEDS

The need to react quickly and effectively to industrial prospects has led to the development of statewide industry services programs by vocational and industrial development leaders not only in Oklahoma, but in Mississippi, South Carolina and a number of other states. This new approach has involved the state agencies directly in job training for the first time.

Typically, job skills training is carried out by secondary schools, area vocational-technical schools, colleges, technical institutes and other local educational institutions, with the state providing funds, consultant and supervisory services, and program development support.

Ongoing vocational programs have been effective in providing trained workers for a stable job market. Local educational institutions are not always able, however, to react to the more pressing needs of new and expanding industries.

Another factor to be considered is that in many states, not all communities are included in area vocational-technical school or community college districts. In such cases, the needs of the industry will not be served unless the state agency accepts the responsibility.

Advantages of Statewide Coordination

Statewide coordination of an industry services program makes it possible to provide training with a minimum of lead time when a local education agency has not budgeted for such training. Start-up training can often be performed more readily by an industry services program than by local training institutions, which have usually committed most of their resources to ongoing vocational programs.

With our industry services program, the same flexibility and thoroughness of training are available anywhere within Oklahoma's boundaries. Training is provided to any section of the state without regard to the fiscal ability of a community to support the program. Our staff in the state vocational agency are able to work in close coordination with industrial development officials throughout the state in recruiting new industry and committing state resources to provide specialized training, regardless of the proposed location of an industrial plant.

A SUCCESS STORY

Oklahoma's industry services program, which began in 1968, has played a significant role in the state's industrial growth. Through its contribution, jobs have been brought to Oklahoma that would otherwise have gone elsewhere. Between 1968 and 1978 Oklahoma's investment in industrial development ranged from a low of $58 million to a high of $665 million.

Voc Ed Gets Involved

In 1968 the State Department of Vocational and Technical Education assumed the responsibility for providing a trained labor force for new and expanding industries in Oklahoma. The decision to staff up for industrial development was not made lightly. In fact, this was an unprecedented move for Oklahoma, a state whose economy had long been dominated by agriculture.

Once the program was funded by the state legislature, the state vocational agency began to react to industrial prospects in a quick, effective and forceful manner. It is clear that the availability of high-quality technical training has been a big incentive for many businesses and industries to move to Oklahoma. For example, one state industrial development coordinator said in a report: "At the present time Oklahoma is definitely the only state X-Company is interested in. I think a lot of the credit belongs to our vo-tech program."

Organizing Resources

Oklahoma's industry services program follows the multiple-agency approach described in Part I of this publication. The state's Industrial Development Department seeks new and expanding industries through personal contacts and national advertising. Incentives that are stressed include the quality of life in Oklahoma, the high productivity of employees in the state and the availability of state-supported vocational training.

The Industrial and Technical Services Division (ITS) in the State Department of Vocational and Technical Education also performs part of the "seek-and-find" mission, often working with a potential employer for a year or more until the decision is made to expand or relocate. The ITS has its offices in the same building as the state's Industrial Development Department so they can maintain close communications with one another.

The ITS staff coordinates the Oklahoma industry services program by

24

drawing on the resources of all appropriate agencies. The ITS training coordinator works with industry representatives to develop a training plan tailored to the specific needs of the industry. A training plan could include the Special Schools Division in the State Department of Vocational and Technical Education, area vocational-technical schools, skills centers, technical institutes, community colleges and the Bureau of Indian Affairs (BIA). In some cases, those responsible for administering education and training programs such as the Comprehensive Employment and Training Act (CETA) and the Work Incentive (WIN) program contribute expertise and resources.

Once the decision is made to expand or relocate, the task of developing a training agreement is turned over to the Special Schools Division. This division also develops a curriculum, selects training facilities, and arranges for equipment and personnel to carry out the training program.

Community Support

When we decided initially to staff up for industrial development, some state vocational-technical staff members predicted a variety of damaging effects on ongoing programs, with funds being syphoned away and support deteriorating as business and industry flocked to the new program. These ill effects never materialized, however. Support for vocational education has never been greater either in the state legislature or in local communities.

The Special Schools Division works with local school officials in developing specific training programs. The support and understanding of local officials is essential because local vocational institutions will be responsible for the ongoing training for the industry once the intensive start-up training is accomplished.

We think it is equally important for the business or industry to be aware of the ongoing vocational programs offered in the community. In fact, the presence of good vocational programs in a community is often a big incentive for an industry to move to the area.

STIMULATING INDUSTRIAL DEVELOPMENT

Oklahoma's success in stimulating industrial development is based largely on presenting information effectively and maintaining close ties with all involved groups.

To keep the public aware of training opportunities, the ITS staff give numerous civic presentations. To make industry personnel more aware of the state's flexible program and to stay abreast of current industrial development activities, ITS staff members belong to the Southern Industrial Development Council (SIDC), Chamber of Commerce Executives and the Governor's Industrial Development Team.

Industry services personnel in other states can join similar regional and local organizations. Another possibility is membership in the American Industrial Development Council, a national organization.

ITS staff members not only visit industries throughout the state, but often accompany industrial development groups when they call on out-of-state industry personnel. The presence of vocational representatives on these industrial development tours gives the industry immediate access to information on the state's training capabilities. The vocational representatives have the authority to commit state resources on the spot to support an industry services program, within limits predetermined by the state agency. They are careful not to overcommit money or other resources.

Selling the Program

To show the industry the capabilities of the Oklahoma industry services program, a 14-minute film is shown after a brief introduction. Information given in this presentation includes the option of home plant visitation by vo-tech staff, pre-employment training possibilities, available training facilities, qualifications and preparation of instructors, on-the-job training, facilities and equipment, manuals and other training aids to be developed, supervisory development opportunities and first-aid training for start-up staff.

The manner in which this information is presented can greatly influence the prospect's decision. Therefore, the presentation is candid, lively and enthusiastic.

State vocational staff then discuss with industry representatives how many jobs will be available both immediately and in the long run, what kinds of jobs, any specialized equipment needed and the estimated start-up date. After the discussion, supplementary materials such as training brochures and testimonial letters from participating industries are left with the prospect.

Follow-up is made with a summarizing letter. At this point, the prospect often has enough information to make a favorable recommendation on plant location.

Planning the Program

After the first visit with the prospect, the ITS staff usually introduces the state coordinator for the Special Schools Division into the informational exchange process. As plans develop, the area vocational-technical school superintendent, skills center director and other local officials are included when appropriate. In working out a training program, a training specialist of the Special Schools Division may visit the parent plant of a company to study an operation similar to that which will be established. The essential skills needed, the length of the training period and the number of people to be trained are details to be negotiated with company officials.

THE PROGRAM IN ACTION

The Special Schools Division has trained people for a wide range of jobs, from operating fork lifts to sewing children's apparel to maintaining qual-

ity control in production to manufacturing stained glass. The training takes place in comprehensive high schools, junior colleges, plant vestibules or on the production line before production starts.

One of the most successful programs Oklahoma has conducted involved renting a vacant warehouse, setting up a slat assembly line and having trainees actually assemble units provided by the participating company. About 50 percent of the initial trainees had college degrees but had been unable to get jobs in their field of expertise. Some have used the combination of academic education and vocational skills to move up within the company.

While trainees are generally exposed to only those skills needed to do the job when they are employed, situations differ among companies. Some put the trainees on their payroll while they undergo training that is planned jointly by the Special Schools Division and industry representatives. Other companies require rather elaborate pre-employment training, but virtually guarantee employment to those who satisfactorily complete the program.

Training Aids

A coordinator and staff of training specialists, technical writers and illustrators in the Special Schools Division develop training aids such as charts and other visual aids. In some cases, one or more manuals are prepared, covering all aspects of a job.

Staffing Needs

Personnel to staff an industry services program are provided by the Special Schools Division as needed. The only permanent staff members needed are state administrative personnel such as training coordinators, training specialists, technical writers, equipment maintenance specialists, warehouse personnel and truck drivers.

Staff for operating a specific training program should be temporary employees who serve only for the duration of the program. These staff members are recruited as needed. They are usually employees of the industry for which training is being done, but occasionally vocational personnel in local educational institutions are hired. Pre-employment or on-the-job training for their new position may be offered to these individuals.

Instructors are approved jointly by the industry and the state vocational agency. One consideration in employing instructional staff is that they must have applicable industrial experience. Often it is necessary to go outside the local area and occasionally the state to obtain highly specialized instructors for a specific program.

Instructional personnel hired on a temporary basis may have to be paid salaries considerably higher than the going rate for instructors in local vocational programs. In Oklahoma we have frequently found it necessary to offer temporary employees up to 125 percent of the going rate for a similar permanent position in order to attract high-quality instructors. The reason for higher salaries is that instructors may have to relocate and the employment is temporary.

THE PROGRAM IN ACTION: A CASE STUDY

Industry	Burgess-Norton Manufacturing Company.
Function	Builds high speed diesel piston pins.
Training Needs	Pre-employment training for workforce of new $7 million plant in Claremont, Oklahoma.
Training Agreement	Based on understanding that Burgess-Norton would participate actively in training program, with technical support from Special Schools Division.
Basic Training	Company orientation, safety, math, blueprint reading, proper use of precision measuring instruments, company philosophy on quality and merits of free enterprise system.
Specialized Training	Detailed instruction in particular skill area such as tool grinding or quality assurance.
Training Site	Located on campus of Claremont Junior College.
Equipment	Basic equipment such as milling machines and work tables provided by Special Schools Division's equipment pool. Specialized equipment such as automatic screw machines provided by Burgess-Norton.
Instructors	Chosen from ranks of company supervisors. Classes in instructional techniques given by Special Schools Division.
Training Schedule	Timed so end of training coincided with availability of jobs.
Training Program	Consisted of three groups with 25 or fewer trainees each. Groups met for 3-hour session 3 times a week for 12 weeks. Trainees spent one-half of basic training phase in classroom and one-half in shop. Specialized training phase carried out entirely at site of trainee's specialty area.
Results	Company hired 52 of 60 program graduates and had promoted 21 of them 8 months later. New plant began to turn a profit after only 7 months, a fact attributed in part to success of training program.

THE PROGRAM IN ACTION: A CASE STUDY

Industry Comments	"We have some of the finest people we could possibly have hired working here. I know the Special School's pre-employment training program played a major part not only in teaching them skills to operate our equipment but also helped our employees develop positive attitudes about their jobs, their company and work in general" (Arnold Nyman, plant manager). "Any future major expansion plans for the Claremont facility will include the Special Schools Division" (W. W. Rasmussen, vice president.

Note: Information on the Burgess-Norton case study was drawn largely from "One Company's Experience with Vo-Tech Training," Journal of Technology, Oklahoma Technical Society, October 1977.

TRAINING FACILITIES

To the greatest extent possible, training is done in local educational institutions. When the program is so large or the training so specialized that it cannot be accommodated in school facilities, temporary facilities provided by the community, the state vocational agency or the company itself are utilized. The only permanent buildings needed are warehousing facilities where equipment is stored, repaired and inventoried before being shipped to the next training location. This gives the training program the flexibility to adapt to changing needs.

When it is necessary to select a training site, two important considerations are flexibility of the interior space and proximity to the plant. Does the facility meet the industry's particular needs? Does it have appropriate floor space, lighting and electrical wiring? Are there enough restrooms, classrooms, laboratories and outside entrances? Is the air exhaust system adequate?

Some companies prefer that the training site be near the plant so trainees can develop a regular transportation pattern as close as possible to the one they will follow as employees. An excellent possibility that should not be overlooked for an industry services program is the facility to be occupied by the industry. It is often possible to carry out the training program in new plant facilities before production begins.

Aesthetics are not as important for the training site of an industry services program as for ongoing vocational programs. The effectiveness of industry services programs lies not in the attractiveness of the facilities, but in the fact that students completing the program are virtually assured a job.

Community Involvement

When Oklahoma state vocational personnel arrange for local facilities for training programs, they encourage community involvement as much as possible. We are convinced that it is important in facilities planning to maintain cordial relations with local public officials and school boards.

Flexibility is encouraged, since facilities may have to be used for purposes different from those for which they were constructed or are currently used. Examples of facilities that have been used effectively for Oklahoma industry services programs are newly constructed vocational facilities, abandoned public school facilities, vacant store buildings in small rural communities, empty warehouses and portable buildings.

Communities sometimes have fierce local pride and insist on contributing to the support of the training program. For example, local chambers of commerce or industrial development authorities may pay the rent or utilities for temporary facilities.

Oklahoma's successful industry services program bears out the premise that local communities should be encouraged to provide part of the cost for facilities whenever possible. A community that supports the industry services program can establish strong ties with the industry from the beginning. If a community decides not to contribute funds to the training program, of course, the state bears the total cost.

STATE EQUIPMENT POOLS

The establishment of a state pool of training equipment should be a high priority in setting up an industry services program. Oklahoma's state equipment pool is used to provide relatively short-term, one-shot training in direct support of industrial development. Often the equipment is used to supplement training equipment available in local institutions.

The state-owned equipment is moved on short notice to any location in the state where it is needed for a training program. Once the need has been met, the state transfers the equipment to another location where it is needed or returns it to storage.

Types of Equipment

The inventory of equipment will vary from state to state, depending on the industrial development assets of each state.

Before deciding on the kind of equipment with which to stock the pool, a state vocational agency would do well to study the types of industries that have located or expanded in the state in the past five years. It is also helpful to find out what types of industries are being recruited by industrial development groups. As experience is gained in providing start-up training, additional equipment can be purchased.

The base inventory of equipment should include such items as welders, metal lathes, mills, drill presses, test equipment, warehouse handling equipment, trucks, tractors, trailers and forklifts. When highly specialized equipment is required, the industry can be asked to loan it to the program for the training period. One industry services program in Oklahoma reported loans of such highly specialized items as laser beam equipment, coil winding machines and grain harvesting machines.

In general, the more varied the equipment in the pool, the greater the possibility that training can be provided quickly to meet an industry's needs.

Special Legislation

In some states it may be necessary to secure the enactment of special legislation authorizing the establishment of an equipment pool. In 1970, the Oklahoma legislature passed a law that authorized the maintenance of an equipment pool, directed the state board of vocational-technical education to adopt and enforce rules and regulations necessary to carry out the provisions of the law, and authorized the transfer of equipment from school to school as needed.

The law includes all programs conducted for start-up training for new industry, whether they take place in area vocational-technical schools, skills centers, technical institutes, community colleges or industry facilities. All equipment is state-owned and is assigned only for the duration of a specific training program.

Budgeting

An adequate budget for the equipment pool must be developed so equipment currently in use by industry is always in the pool. A pool of modern industrial training equipment is an asset to industrial and economic development. Nothing turns an industrial prospect off quicker than seeing inadequate and outdated equipment in a state vocational education warehouse.

Buying the equipment is only the first step. To operate an equipment pool, it is important that the budget be sufficient for warehousing, inventorying, maintaining, transporting and installing equipment. If adequate funds are not available to provide for all aspects of the pool's operation, it cannot serve its full purpose.

A word of caution: It is often more difficult to obtain adequate funds to maintain a state equipment pool than it is to get funds to initiate such a program.

Loans to Ongoing Programs

If highly specialized or expensive equipment must be purchased for a training program, it may be a good idea to loan it to ongoing vocational programs when not needed by the state training agency.

For example, the Oklahoma Special Schools Division bought a Carmody Trainer, an instrument that measures fluid and pneumatic flow, for a specialized training program for the Weyerhaeuser Corporation. When the Weyerhaeuser program was completed, the Carmody Trainer was loaned to Eastern Oklahoma State College for its fluid power technician training program. As a result, the college program has benefitted and the state's expensive tool is in regular use but is still available for recall if needed.

Some training equipment loaned to various educational programs may have to be recalled if it is not being used adequately or properly. State officials should not recall equipment from ongoing programs unless absolutely necessary, however, because the goodwill of local institutions is vital to the success of any industry services program.

RESULTS

The employment rate in Oklahoma has increased 140 percent during the past decade, a statistic that can be attributed in large part to the state's strong industry services program. The program has served 243 companies in 99 communities, including major corporations such as Goodyear, Dayton, Uniroyal, Westinghouse, General Motors and Xerox.

Training has been provided to 23,428 individuals, with an 84 percent training completion rate. Forty-eight percent of the program graduates are women. The average cost per trainee is $119.05.

Like many of the other states active in using state funds to promote industrial development, Oklahoma is a sunbelt state. Realizing that these states are projected to have 78 percent of the total population increase between 1970 and the year 2000, Oklahoma is responding to the fact that business goes where the people are, and that business pursues a labor force as well as a market.

Oklahoma has encouraged new and expanding industries by committing itself to delivering a labor force trained to industry specifications, using all resources of its statewide industry services program. Through its willingness to cooperate, Oklahoma has developed a flexible training program of which both industry and local communities can be proud. Any state can develop an industry services program that is equally successful, once it perceives that vocational education has a pivotal role in industrial and economic development.

Order Number 10179
$3.00

To order additional copies, write or call:
Special Publications
American Vocational Association
2020 N. 14th St.
Arlington, Virginia 22201
(703-522-6121)

Discounts for bulk orders:
10% off for 10-19 copies
15% off for 20-29 copies
20% off for 30-39 copies
25% off for 40-49 copies
30% off for 50+ copies

All orders must be accompanied by an official purchase order (minimum $10) or payment.